

**COMPUTER SYSTEM WITH HEAP RESET****ABSTRACT**

5           A computer system provides an object-based virtual  
machine environment for running successive applications.  
The computer system includes storage, at least a portion  
of which is logically divided into two or more heaps in  
which objects can be stored. A first heap is reset  
10 between successive applications, and a second heap  
persists from one application to the next. A card table  
is provided which comprises multiple cards, each  
corresponding to a region of said storage. Each card in  
the card table is set to null when the first heap is  
15 reset between successive applications. A card is marked  
whenever an object in its corresponding storage region is  
created or updated. It is then possible to detect  
potential references from the second heap to the first  
heap at reset by scanning the cards in the card table  
20 corresponding to the second heap, and detecting any cards  
which have been marked.

The system further identifies any objects on the  
first heap which have a finalization method. The  
finalization methods of any such identified objects are  
25 then run on the main thread prior to reset of the first  
heap.